	Universitas Negeri Surabaya Faculty of Mathematics and Natural Sciences Physics Education Undergraduate Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Multimedia	8420302143	Study Program Elective Courses	T=2	P=0	ECTS=3.18	6	December 27, 2022

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	Abdul Kholiq, M.Si.	Drs. Imam Sucahyo, M.Si	Mita Anggaryani, M.Pd., Ph.D.

Learning model	**Project Based Learning**

Program Learning Outcomes (PLO)

PLO study program which is charged to the course

Program Objectives (PO)

PO - 1	Explain the concept of multimedia
PO - 2	Analyzing the application of multimedia in learning
PO - 3	Describe interactive multimedia in learning
PO - 4	Describe the methodology in multimedia development
PO - 5	Make learning videos

PLO-PO Matrix

P.O
PO-1
PO-2
PO-3
PO-4
PO-5

PO Matrix at the end of each learning stage (Sub-PO)

P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PO-1																
PO-2																
PO-3																
PO-4																
PO-5																

Short Course Description	This course is a course that designs and develops the use of computers to present and combine text, sound, images, animation, audio and video with tools and connections so that users can navigate, interact, create and communicate effectively. often used in the world of informatics.

References

Main :

1. Mulyana I, Prajuhana A P, Iqbal M S, 2019, desain Grafis dan Multimedia: Teori dan Implementasi, Bogor: LPPM Universitas Pakuan.
2. Suyanto M, 2005, Multimedia: Alat untuk Meningkatkan Keunggulan Bersaing, Yogyakarta: Andi Offset
3. Munir, M. (2012). Multimedia konsep & aplikasi dalam pendidikan. Bandung: Alfabeta.

Supporters:	

1. Hasanah, A. R., Salam, M. A., & Mahtari, S. (2019, February). Developing the interactive multimedia in physics learning. In Journal of Physics: Conference Series (Vol. 1171, No. 1, p. 012019). IOP Publishing.
2. Muller, D. A. (2008). Designing effective multimedia for physics education. Sydney: University of Sydney.
3. Shermuhammedov, A. A., Mustafakulov, A. A., & Mamatkulov, B. H. (2021). Multimedia In The Teaching Of Physics Use. Conferencea, 105-108.
4. Girwidz, R., & Kohnle, A. (2022). Multimedia and Digital Media in Physics Instruction. In Physics Education (pp. 297-336). Cham: Springer International Publishing.
5. Qi, D., Zhang, S., Yang, C., He, Y., Cao, F., Yao, J., ... & Wang, L. V. (2020). Single-shot compressed ultrafast photography: a review. Advanced Photonics, 2(1), 014003-014003.
6. Abdulloh, R. (2016). Easy & Simple-Web Programming. Elex Media Komputindo.

Supporting lecturer	Drs. Imam Sucahyo, M.Si. Abd. Kholiq, S.Pd., M.T. Mita Anggaryani, M.Pd., Ph.D. Dr. Muhammad Satriawan, M.Pd. Utama Alan Deta, S.Pd., M.Pd., M.Si. Muhammad Habibbulloh, M.Pd. Dr. Oka Saputra, M.Pd

Week-	**Final abilities of each learning stage (Sub-PO)**	**Evaluation**		**Help Learning, Learning methods, Student Assignments, [Estimated time]**		**Learning materials [References]**	**Assessment Weight (%)**
		Indicator	**Criteria & Form**	**Offline (*offline*)**	**Online (*online*)**		
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
1	Explain the basic concepts of multimedia	1.Describe the meaning of multimedia 2.Skilled in analyzing photo taking techniques 3.Timely attendance 4.Timely submission of assignments	**Form of Assessment** : Participatory Activities	Small Group Discussion 2 x 50‘		**Material:** Basic concepts of multimedia **Reference:** *Munir, M. (2012). Multimedia concepts & applications in education. Bandung: Alphabeta.*	5%
2	Analyzing the application of multimedia in learning	1.Explain the characteristics of multimedia in physics learning 2.Analyzing the use of interactive multimedia in physics learning 3.Timely attendance 4.Timely submission of assignments	**Criteria:** Non test **Form of Assessment** : Participatory Activities	Small Group Discussion 2 x 50‘		**Material:** Basic concepts of multimedia **Reference:** *Munir, M. (2012). Multimedia concepts & applications in education. Bandung: Alphabeta.*	5%
3	Describe interactive multimedia in learning	1.Explain the meaning of interactive multimedia 2.Analyzing the impact of using interactive multimedia in physics learning 3.Timely attendance 4.Timely submission of assignments	**Criteria:** Non test **Form of Assessment** : Participatory Activities	Small Group Discussion 2 x 50‘		**Material:** Basic concepts of multimedia **Reference:** *Munir, M. (2012). Multimedia concepts & applications in education. Bandung: Alphabeta.*	5%

4	Describe the methodology in multimedia development	1. Describe the stages of multimedia development 2. Analyzing problems in multimedia development 3. Timely attendance 4. Timely submission of assignments	**Criteria:** Non test **Form of Assessment** : Participatory Activities	Small Group Discussion 2 x 50'		**Material:** Basic concepts of multimedia **Reference:** *Munir, M. (2012). Multimedia concepts & applications in education. Bandung: Alphabeta.*	5%
5	Make learning videos	1. Explains basic video shooting techniques 2. Skilled in taking video images (Shooting) 3. Timely attendance 4. Timely submission of assignments	**Criteria:** Non test **Form of Assessment** : Participatory Activities, Practice/Performance	Small Group Discussion, simulation 2 x 50'		**Material:** Basic concepts of multimedia **Reference:** *Munir, M. (2012). Multimedia concepts & applications in education. Bandung: Alphabeta.* **Material:** Basics of making learning videos **References:** *Mulyana I, Prajuhana AP, Iqbal MS, 2019, Graphic and Multimedia design: Theory and Implementation, Bogor: LPPM Pakuan University.*	5%
6	Make learning videos	1. Produce learning scripts for video creation 2. Produce quality physics learning videos	**Criteria:** Non test **Form of Assessment** : Project Results Assessment / Product Assessment	Team based project, workshop 2 x 50'		**Material:** Basics of making learning videos **References:** *Mulyana I, Prajuhana AP, Iqbal MS, 2019, Graphic and Multimedia design: Theory and Implementation, Bogor: LPPM Pakuan University.*	5%
7	Make learning videos	1. Produce learning scripts for video creation 2. Produce quality physics learning videos	**Criteria:** Non test **Form of Assessment** : Project Results Assessment / Product Assessment	Team based project, workshop 2 x 50'		**Material:** Basics of making learning videos **References:** *Mulyana I, Prajuhana AP, Iqbal MS, 2019, Graphic and Multimedia design: Theory and Implementation, Bogor: LPPM Pakuan University.*	5%

8	Make learning videos	Produce quality physics learning videos	**Criteria:** UTS **Form of Assessment** : Project Results Assessment / Product Assessment	Team based project, presentation of project results 2 x 50'		**Material:** Basics of making learning videos **References:** *Mulyana I, Prajuhana AP, Iqbal MS, 2019, Graphic and Multimedia design: Theory and Implementation, Bogor: LPPM Pakuan University.*	15%
9	Skilled in repairing and manipulating video images (video editing)	Skilled in repairing and manipulating video images (video editing)	**Criteria:** Non test **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance	Team based project 2 x 50'		**Material:** Video Editing **Bibliography:** *Mulyana I, Prajuhana AP, Iqbal MS, 2019, Graphic and Multimedia Design: Theory and Implementation, Bogor: LPPM Pakuan University.*	0%
10	Skilled in repairing and manipulating video images (video editing)	Produce quality edited videos	**Criteria:** Non test **Form of Assessment** : Project Results Assessment / Product Assessment	Team based project 2 x 50'		**Material:** Video Editing **Bibliography:** *Mulyana I, Prajuhana AP, Iqbal MS, 2019, Graphic and Multimedia Design: Theory and Implementation, Bogor: LPPM Pakuan University.*	5%
11	Skilled in repairing and manipulating video images (video editing)	Produce quality edited videos	**Criteria:** Non test **Form of Assessment** : Project Results Assessment / Product Assessment	Team based project, workshop 2 x 50'		**Material:** Video Editing **Bibliography:** *Mulyana I, Prajuhana AP, Iqbal MS, 2019, Graphic and Multimedia Design: Theory and Implementation, Bogor: LPPM Pakuan University.*	5%
12	Examining basic web creation techniques	1. Able to describe basic web creation techniques 2. Able to explain the stages in making basic web creation techniques 3. Timely attendance 4. Activeness during learning	**Criteria:** Non test **Form of Assessment** : Participatory Activities	Small group discussions 2 x 50'	Small group discussions	**Material:** Basics of web creation **Reference:** *Abdulloh, R. (2016). Easy & Simple-Web Programming. Elex Media Komputindo.*	5%
13	Examining basic web creation techniques	1. Able to describe basic web creation techniques 2. Able to explain the stages in making basic web creation techniques 3. Timely attendance 4. Activeness during learning	**Criteria:** Non test **Form of Assessment** : Participatory Activities	Small group discussion, simulation 2 x 50'	Small group discussion, simulation	**Material:** Basics of web creation **Reference:** *Abdulloh, R. (2016). Easy & Simple-Web Programming. Elex Media Komputindo.*	5%

14	Creating a high school physics learning website	Able to produce an attractive physics learning website	**Criteria:** Non test **Form of Assessment** : Project Results Assessment / Product Assessment	Team based project 2 x 50'	Team based projects	**Material:** Basics of web creation **Reference:** *Abdulloh, R. (2016). Easy & Simple-Web Programming. Elex Media Komputindo.*	5%
15	Creating a high school physics learning website	Able to produce an attractive physics learning website	**Criteria:** Non test **Form of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Team based project, workshop 2 x 50'	Team based projects, workshops	**Material:** Basics of web creation **Reference:** *Abdulloh, R. (2016). Easy & Simple-Web Programming. Elex Media Komputindo.*	5%
16	Creating a high school physics learning website	Able to produce an attractive physics learning website	**Criteria:** UAS **Form of Assessment** : Project Results Assessment / Product Assessment	Team based project 2 x 50'	Team based projects	**Material:** Basics of web creation **Reference:** *Abdulloh, R. (2016). Easy & Simple-Web Programming. Elex Media Komputindo.*	20%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	35%
2.	Project Results Assessment / Product Assessment	62.5%
3.	Practice / Performance	2.5%
		100%

Notes

1. **Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
2. **The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
3. **Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
4. **Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
5. **Indicators for assessing** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities or performance of student learning outcomes accompanied by evidence.
6. **Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
7. **Forms of assessment:** test and non-test.
8. **Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
9. **Learning Methods:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
10. **Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
11. **The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
12. TM=Face to face, PT=Structured assignments, BM=Independent study.